

AMENDMENTS TO THE CLAIMS

Please **AMEND** claims 1-17 as shown below.

The following is a complete list of all claims in this application.

1. (Currently Amended) A flat panel display, comprising:
a power unit ~~for supplying~~ generating a constant voltage to each unit;
a gate voltage generating unit ~~for~~ generating a gate on/off voltage;
a controller ~~for receiving driving data and a driving control signal and~~ generating a scan control signal, and a column control signal ~~by utilizing driving data and a driving control signal,~~
~~controlling and outputting a timing format of R, G, B, RGB data; and generating digital~~ gamma data having a plurality of gradation values ~~for gradation~~;
a scan driver unit ~~for receiving the scan control signal and the gate on/off voltage and~~ generating ~~outputting~~ a scan signal ~~utilizing the scan control signal and said gate on/off voltage;~~
a column driver unit ~~for~~ converting the digital gamma data into an analog gradation voltage; and ~~outputting~~ generating a column signal utilizing based on the column control signal, R, G, B the RGB data and the analog gradation voltage; and
a flat display panel ~~for displaying a predetermined an image by utilizing based on the~~ scan signal and the column signal.

2. (Currently Amended) A The flat panel display ~~according to~~ of claim 1, wherein said the controller transmits the R, G, B RGB data of a plurality of bits and the digital gamma

data of a plurality of bits to ~~said~~ the column driver unit through different transmission lines, respectively.

3. (Currently Amended) A The flat panel display ~~according to~~ of claim 2, wherein ~~said~~ the column driver unit comprises a plurality of column driver ICs, each of the column driver ICs comprising:

a first memory ~~for~~ storing the digital gamma data;

a first decoder ~~for~~ decoding the digital gamma data stored in ~~said first~~ the memory;

a first D/A converter ~~for~~ converting the decoded digital gamma data into an analog gradation voltage ~~and outputting the converted analog gradation voltage~~;

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a first shift register ~~for~~ sequentially shifting an output (?) ~~in correspondence to a column line~~;

a first data latch ~~for storing in column line unit data of corresponding capacity from among the R, G, B RGB data from the controller and outputting the stored RGB data in accordance with the output of said first from the~~ shift register;

a second D/A converter receiving the analog gradation voltage from the first D/A converter and the RGB data from the data latch, for selecting and outputting the gradation value voltage corresponding to data value supplied the RGB data from said first the data latch and generating a gradation voltage based on the selecting gradation value; and

a first buffer ~~for~~ buffering the gradation voltage ~~output~~ from ~~said the~~ second D/A converter; and outputting generating the a column signal ~~in line units~~.

4. (Currently Amended) A The flat panel display ~~according to~~ of claim 1, wherein ~~said the~~ controller further comprises:

a signal processing unit ~~for receiving the driving data and the driving control signal and generating controlling timing format of R, G, B the RGB data, by utilizing driving data and a driving control signal, outputting the controlled result, and generating and outputting a scan control signal and a column control signal;~~

a gamma data generating unit ~~for generating a plurality of data for gradation the digital gamma data~~ with reference to the constant voltage ~~supplied from said power unit and outputting gamma data;~~ and

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a mixer unit ~~for mixing the digital gamma data to a blanking section of and the R, G, B RGB data and outputting the mixed result to form a mixed signal,~~

wherein the digital gamma data is arranged in a blanking section of the R, G, B RGB data and the gamma data are transmitted through an identical line.

5. (Currently Amended) A The flat panel display ~~according to~~ of claim 4, wherein ~~said the~~ column driver unit is ~~constituted by~~ comprises a plurality of column driver ICs, each of the column driver ICs comprising;

a data diving unit ~~for receiving and dividing the mixed signal from the mixer unit into the R, G, B RGB data and the digital gamma data;~~

a ~~second~~ memory ~~for storing the digital gamma data divided by said from the data diving unit;~~

a ~~second~~ decoder ~~for decoding the digital gamma data of said second from the memory;~~

a ~~third~~ first D/A converter ~~for~~ converting the decoded digital gamma data into an analog gradation voltage ~~and outputting the converted voltage;~~

a ~~second~~ shift register ~~for~~ sequentially shifting a timing pulse ~~output corresponding to~~
~~column line;~~

a ~~second~~ data latch ~~for~~ storing data of corresponding capacity ~~from among R, G, B~~ the
RGB data from the data dividing unit and outputting the stored RGB data according to ~~an~~ the
timing pulse output of said second from the shift register;

a ~~fourth~~ second D/A converter receiving the analog gradation voltage from the first D/A
converter and the RGB data from the data latch, for selecting the gradation voltage value
corresponding to ~~value of data supplied~~ the RGB data from said second the data latch and
~~outputting selected~~ generating a gradation voltage based on the selected gradation value; and

a ~~second~~ buffer ~~for~~ buffering the gradation voltage ~~output~~ from ~~said fourth~~ the D/A
converter and ~~outputting~~ generating the a column signal ~~in line units.~~

6. (Currently Amended) A flat panel display, comprising:

a power unit ~~for supplying~~ generating a constant voltage;

a gate voltage generating unit ~~for~~ generating a gate on/off voltage;

a controller ~~for~~ receiving driving data and a driving control signal and generating a scan
control signal, ~~and a column control signal, by utilizing driving data and a driving control signal,~~
~~controlling and outputting timing format of R, G, B~~ RGB data, generating and digital gamma
data having a plurality of gradation values ~~for gradation~~ with reference to the constant voltage
supplied from said the power unit, ~~and wherein the controller encoding and outputting~~ encodes

the scan control signal, the column control signal, ~~R, G, B~~ the RGB data in a differential signal format;

a scan driver unit ~~for decoding the scan control signal included in the differential signal~~ and ~~outputting~~ generating a scan signal utilizing based on the scan control signal and the gate on/off voltage;

a column driver unit ~~for decoding the column control signal, R, G, B data and column data included in the differential signal,~~ converting the digital gamma data into an analog gradation voltage, and outputting a column signal utilizing based on the column control signal, ~~R, G, B~~ RGB data and the analog gradation voltage; and

a flat display panel ~~for displaying a predetermined an image by utilizing based on~~ the scan signal and the column signal.

7. (Currently Amended) A The flat panel display ~~according to~~ of claim 6, wherein ~~said the~~ controller comprises:

a first signal processing unit ~~for controlling timing format of R, G, B data by utilizing~~ receiving the driving data and the driving control signal, ~~outputting the controlled result,~~ and generating ~~and outputting the RGB data,~~ the scan control signal and the column control signal;

a gamma data generating unit ~~for generating plural data for gradation~~ the digital gamma data with reference to the constant voltage ~~supplied from said the~~ power unit ~~and outputting gamma data;~~ and

a differential signal transmitting unit ~~for encoding into differential signal~~ the scan control signal, the column control signal, ~~R, G, B~~ the RGB data and the digital gamma data, ~~and transmitting the result in the differential signal format.~~

8. (Currently Amended) A ~~The~~ flat panel display ~~according to~~ of claim 7, wherein ~~said the~~ column driver unit comprises a plurality of column driver ICs, each of the column driver ICs comprising;

a differential signal receiving unit ~~for~~ decoding the differential signal;

a memory ~~for~~ storing the decoded column control signal, ~~R, G, B~~ the RGB data and the digital gamma data;

a decoder ~~for~~ decoding the digital gamma data stored in ~~said the~~ memory;

a first D/A converter ~~for~~ converting the decoded digital gamma data into an analog gradation voltage ~~and outputting the converted analog gradation voltage;~~

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a shift register ~~for~~ sequentially shifting a timing pulse ~~output corresponding to a column line;~~

a data latch ~~for storing in column line unit data of corresponding capacity from among R, G, B~~ the RGB data from the memory and outputting the RGB data according to the ~~output of timing pulse from said the~~ shift register;

a second D/A converter ~~for selecting and outputting gradation voltage corresponding to data value supplied from said data latch~~ receiving the analog gradation voltage from the first D/A converter and the RGB data from the data latch, selecting the gradation value corresponding to the RGB data from the data latch and generating a gradation voltage based on the selected gradation value; and

a buffer ~~for~~ buffering ~~said the~~ gradation voltage output from ~~said the~~ second D/A converter, and outputting a the column signal ~~in line units.~~

9. (Currently Amended) A The flat panel display ~~according to~~ of claim 6, wherein ~~said~~ the differential signal is an RSDS signal.

10. (Currently Amended) A The flat panel display ~~according to~~ of claim 6, wherein ~~said~~ the differential signal is an LVDS signal.

11. (Currently Amended) A The flat panel display ~~according to~~ of claim 6, wherein ~~said~~ the differential signal is a TMDS signal.

12. (Currently Amended) A The flat panel display ~~according to~~ of claim 7, wherein ~~said~~ the differential signal is an RSDS signal.

13. (Currently Amended) A The flat panel display ~~according to~~ of claim 7, wherein ~~said~~ the differential signal is an LVDS signal.

14. (Currently Amended) A The flat panel display ~~according to~~ of claim 7, wherein ~~said~~ the differential signal is a TMDS signal.

15. (Currently Amended) A The flat panel display ~~according to~~ of claim 8, wherein ~~said~~ the differential signal is an RSDS signal.

16. (Currently Amended) A The flat panel display ~~according to~~ of claim 8, wherein ~~said~~ the differential signal is an LVDS signal.

17. (Currently Amended) ~~A~~ The flat panel display ~~according to~~ of claim 8, wherein
said the differential signal is a TMDS signal.
